

November 8, 1960

Dr. E. M. Kratz, Vice President
Mono-Sol Corporation
407 County Line Road
Gary, Indiana

Dear Doctor Kratz:

My hearty thanks for your letter of November 3 and for the accompanying information and samples. We are looking at the samples you furnished to get a better idea of their applicability to our requirements. This will take some time and I will give you further information when our preliminary tests have been completed.

Off hand, the optical PVA film seems the most promising and I would appreciate more information on the forms in which you can conveniently furnish this. For further work, it would suit us to have a roll about one inch in width and perhaps a few hundred feet in length. If your slitting equipment is set up for narrower widths, we could also conveniently use a similar length of one-quarter inch tape. I have no idea whether you can afford to quote this item at a poundage rate comparable to that for larger quantities of PVA film; if \$10 will take care of it, please ship it on the basis of this letter and bill me directly; otherwise, we will process a routine purchase order.

The critical questions from our point of view are (1) the transparency of the film in the ultraviolet (2) the perfection of the surface and its freedom from scratches (3) the facility with which the film will take up small quantities of water, for example, as a mist, to give a tacky surface on which dust will become embedded; this should then dry down to restore the glassy finish of the dry film and be suitable for microscopic observation. I would guess that the higher viscosity PVA films would be most suitable for the purpose.

There is another way in which PVA might be quite useful for microbiological studies, one which might have fairly wide application. Can PVA be made to form filaments which can then be compacted to form a filter to remove dust from air passing through it? The advantage of this type of filter would be that the addition of water in small amounts would dissolve the filter, release the dust, and then this would become trapped for ready observation in a transparent glassy film as the water evaporated. In other applications, additional water would be added to solubilize the water completely and the dust collected by sedimentation or other means, for further examination and analysis. For the latter procedure other types of fiber, for example, calcium alginate and gelatin foam have been used but I am not sure they are as satisfactory as PVA ought to be if properly compounded and developed for this line of applications. A related use of PVA filament material would be in the fabrication of swabs and other sampling pads, etc. that would be quite useful in both hospital and research laboratory applications.

Yours sincerely,

Joshua Lederberg
Professor of Genetics